Product sheet

PANC 08.13 Cells | 305391

General information

Description	The PANC 08.13 cell line, also known as PL9, is a pancreatic cancer cell model derived from adenocarcinoma. It has been included in studies focused on understanding genomic variations, including allelic loss, homozygous deletions, and broader chromosomal instability. This cell line is part of an extensive set of pancreatic cancer models used to analyze somatic alterations in cancer cells, particularly in the absence of matched normal tissues, making it ideal for high-resolution genetic mapping. In a study utilizing Affymetrix 100K SNP arrays, PANC 08.13 was examined alongside 25 other pancreatic cancer cell lines. These arrays allowed for high-density analysis of single nucleotide polymorphisms (SNPs) and revealed the allelic status across the genome without requiring matched normal samples. Such studies help identify critical regions of allelic loss (LOH), gene deletions, and chromosomal recombination events, which are frequent in pancreatic cancer cells. PANC 08.13's genetic characterization includes frequent mutations in driver genes typically associated with pancreatic cancer, such as KRAS, TP53, CDKN2A, and SMAD4. These genetic defects are hallmarks of pancreatic ductal adenocarcinoma and contribute to uncontrolled cellular proliferation, disrupted cell cycle regulation, and defective apoptosis mechanisms. Studies leveraging cell lines like PANC 08.13 allow for the development of targeted therapies and the identification of novel therapeutic vulnerabilities in pancreatic cancer.
Organism	Human
Tissue	Pancreas
Disease	Adenocarcinoma
Applications	3D cell culture, Cancer research
Synonyms	Panc 8.13, Panc-08.13, PANC-08-13, Panc_08_13, Panc08.13, Panc8.13, Panc-8_13, Panc-813, PANC 813, Panc813, PANC813, PANC0813, Panc0813, Pa14C, PL9, PL-9

Characteristics

Age	85 years
Gender	Male
Ethnicity	Caucasian
Morphology	Epithelial-like
Cell type	Epithelial cell

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Growth properties	Adherent

Regulatory Data

Citation	PANC 08.13 (Cytion catalog number 305391)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_1638

Biomolecular Data

Antigen expression	MHC class I +; MHC class II -
Oncogenes	K-ras+
Tumorigenic	Yes; Yes in nude or SCID mice
Mutational profile	Mutation: KRAS, Simple, p.Gly12Asp (c.35G>A), Homozygous; Mutation: SMAD4, Simple, p.Cys123Metfs*2 (c.366dupA) (c.366_367insA), Homozygous

Handling

Culture Medium	RPMI 1640, w: 2.0 mM stable Glutamine, w: 2.0 g/L NaHCO3 (Cytion article number 820700a)
Supplements	Supplement the medium with 15% FBS, 0.01 mg/ml Insulin
Dissociation Reagent	Accutase
Doubling time	20 hours

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Subculturing	For routine adherent cell culture: Aspirate the old culture medium from the adherent cells, and wash them with PBS to remove any remaining medium. After aspirating the PBS, add the appropriate volume of Trypsin/EDTA solution based on the culture vessel size (e.g., 1 ml for a T25 flask, 3 ml for a T75 flask) and incubate at room temperature or 37°C until the cells detach (5-10 minutes). Monitor detachment under a microscope, and gently tap the vessel if necessary to release the cells. Once detached, add complete medium to inactivate the Trypsin/EDTA, gently resuspend the cells, and transfer an aliquot of the cell suspension into a new culture vessel containing fresh medium. Place the vessel in an incubator set to 37°C with 5% CO_2, and change the medium every 2-3 days.
Seeding density	1-3 x 10^4/cm²
Fluid renewal	2 to 3 times per week
Freeze medium	As a cryopreservation medium, we use complete growth medium (including FBS) + 10% DMSO for adequate post-thaw viability, or CM-1 (Cytion catalog number 800100), which includes optimized osmoprotectants and metabolic stabilizers to enhance recovery and reduce cryo-induced stress.

Thawing and Culturing Cells

1. Confirm that the vial remains deeply frozen upon delivery, as cells are shipped on dry ice to maintain optimal temperatures during transit.
2. Upon receipt, either store the cryovial immediately at temperatures below -150°C to ensure the preservation of cellular integrity, or proceed to step 3 if immediate culturing is required.
3. For immediate culturing, swiftly thaw the vial by immersing it in a 37°C water bath with clean water and an antimicrobial agent, agitating gently for 40-60 seconds until a small ice clump remains.
4. Perform all subsequent steps under sterile conditions in a flow hood, disinfecting the cryovial with 70% ethanol before opening.
5. Carefully open the disinfected vial and transfer the cell suspension into a 15 ml centrifuge tube containing 8 ml of room-temperature culture medium, mixing gently.
6. Centrifuge the mixture at 300 x g for 3 minutes to separate the cells and carefully discard the supernatant containing residual freezing medium.
7. Gently resuspend the cell pellet in 10 ml of fresh culture medium. For adherent cells, divide the suspension between two T25 culture flasks; for suspension cultures, transfer all the medium into one T25 flask to promote effective cell interaction and growth.
8. Adhere to established subculture protocols for continued growth and maintenance of the cell line, ensuring reliable experimental outcomes.

Incubation Atmosphere	37°C, 5% CO_2, humidified atmosphere.
Shipping Conditions	Cryopreserved cell lines are shipped on dry ice in validated, insulated packaging with sufficient refrigerant to maintain approximately −78 °C throughout transit. On receipt, inspect the container immediately and transfer vials without delay to appropriate storage.
Storage Conditions	For long-term preservation, place vials in vapor-phase liquid nitrogen at about −150 to −196 °C. Storage at −80 °C is acceptable only as a short interim step before transfer to liquid nitrogen.

Quality Control & Molecular Analysis

Sterility	Mycoplasma contamination is excluded using both PCR-based assays and luminescence-based mycoplasma detection methods. To ensure there is no bacterial, fungal, or yeast contamination, cell cultures are subjected to daily visual inspections.